

## SOLVING RAPTOR-HUMAN CONFLICTS

ROBERT E. KENWARD

*Institute of Terrestrial Ecology, Furzebrook Research Station, Wareham, Dorset BH20 5AS, U.K.*

The eight expanded abstracts that follow are from papers presented in a symposium on "Solving Raptor/Human Conflicts" at the 1993 European conference of Raptor Research Foundation, Inc. in Canterbury, U.K. The aim was to take stock of current information on contentious issues involving raptors, to indicate where more information was needed, and to prepare a Position Statement that would encourage bridge-building between raptor interests and groups inconvenienced by raptors. The Raptor Research Foundation, Inc. thanks the authors, the referees of these publications and the many people who contributed toward the Position Statement, which is published separately.

The first of these papers was cowritten by Mike Kochert and the late Butch Olendorff, summarizing the prolonged contribution that Butch made to saving raptors and utility companies from the problems that can arise when raptors perch or nest on powerlines. It is complemented by two publications from related studies in Europe and Africa. A second pair of papers describes pioneering work being done in the U.S. to predict and avoid collisions between large raptors and aircraft. It precedes a consideration of how to handle raptor attacks on humans, and the last two abstracts describe problems and solutions from studies of raptor predation on game and livestock. One paper was withdrawn from the proceedings because the research has moved forward rapidly and is being published elsewhere. This is a continuing study of the impact of predation by Hen Harriers (*Circus cyaneus*) and Peregrine Falcons (*Falco peregrinus*) on Red Grouse (*Lagopus lagopus*) in Scotland (Redpath and Thirgood 1997, Thirgood and Redpath 1997, in press a, b). Large areas of moorland,

maintained primarily for shooting grouse, support an interesting assemblage of wildlife, including several raptor species. Following the cessation of illegal raptor control in the main study area, harrier numbers increased from two breeding females in 1992 to 20 pairs in 1997, with peregrine pairs doubling from three to six. Raptor predation was largely additive and could remove 50% of the grouse population between spring and autumn, with harriers having the greatest impact when grouse stocks were low. On the study moor, the predation reduced grouse numbers far below those on neighboring moors without full protection of raptors. The stocks were then too low to be managed economically for shooting, thereby motivating alternative land uses such as forestry or sheep grazing, which destroy the heather system. There is an urgent need to find an acceptable way between the present widespread illegal control of harriers (Etheridge et al. 1997) and the loss of habitats on which the grouse and harriers depend.

### LITERATURE CITED

- ETHERIDGE, B., R.W. SUMMERS AND R. GREEN. 1997. The effects of illegal killing and destruction of nests on the population dynamics of Hen Harriers in Scotland. *J. Appl. Ecol.* 34:1081-1106.
- REDPATH, S.M. AND S.J. THIRGOOD. 1997. Birds of prey and Red Grouse. The Stationary Office, London, U.K.
- THIRGOOD, S.J. AND S.M. REDPATH. 1997. Red Grouse and their predators. *Nature* 389:330-331.
- AND ———. Raptor and grouse: a conflict in the uplands. Proceedings of the 5th Global Conference of the World Working Group on Birds of Prey and Owls. Berlin, Germany. In press, a.
- AND ———. Can raptor predation limit Red Grouse populations? Proceedings of the 23rd International Ornithological Congress. Durban, South Africa. In press, b.